Reviewer’s report

Title: Ethical concerns with the use of Intelligent Assistive Technology: Findings from a qualitative study with professional stakeholders

Version: 0 Date: 15 Jul 2019

Reviewer: Stuart Nicholls

Reviewer's report:

In this paper the authors describe a qualitative interview study with researchers and healthcare professionals. While the study design and analytic approach is appropriate, I do have some comments that would require addressing before publication.

INTRODUCTION:

Given the title includes the term 'stakeholder' I expected to see more than just researcher and healthcare professional views (e.g. patient, caregiver, or policy-maker views). I would suggest limiting the title to this grouping if others were not involved.

Further, given that a substantial proportion of IATs don't involve end users (i.e. patients) in their development, why were a broader range of stakeholders (such as patients and caregivers) not included in this study?

METHODS:

The authors state that purposive sampling was used: what criteria were used to purposefully sample participants? How were they identified and on what basis?

How were potential participants identified, e.g. were the identified from publications, clinical lists etc?
I'm not clear on the coding process. The manuscript states that ML extracted "ethics-related coding" from the first level coding (i.e. that the text had already been coded in relation to ethics issues), that this was reviewed by TW, but that then the text were then coded inductively? Does this mean that the transcripts (or sections of transcripts deemed to be related to ethical considerations) were re-coded? If so, how did this coding compare to the original coding (and what does this mean in terms of coding validity?). If this is a misinterpretation, please can the authors clarify what is meant.

RESULTS:

Can the authors explore further the belief about ongoing observation; it seems somewhat incongruent to say that they can't make decisions for consent, but we should respect a decision if someone dislikes the robot. I wonder whether the former is about consent, while the latter is about best interest or harms/benefits if the robot is agitating the individual. Insofar as this latter option might be the case, to what extent is this distinct from other forms of clinical care where patients are observed and care modified based on the utility of the care being provided? This (best interests) is alluded to later in the quote from P13 when discussing data access and privacy.

The participants indicated that there should be the ability to turn off devices (section on Data Access) and that there should be consent of data subjects to share data. Yet, how is this accomplished in the context of patients with dementia and where previously it is stated that they cannot give consent?

Page 9 line 16 states that: "In response to the same problem, however, an interviewer implied that the moral importance of preventing deception should be subordinated to the moral obligation to improving the patients' wellbeing." Should that be interviewee - or did the interviewer actually suggest this to the study participants?

I wonder (and worry to some degree) to what extent the theme of distributive justice is an artifact of the interviewer asking whether costs could result in social disparity - were all responses generated as a result of this question, or did this come up spontaneously in any of the interviews?
DISCUSSION

To what extent are the issues around autonomy and consent specific to IATs? It seems that this particular issue is one that would relate to any healthcare technology that would potentially be used with dementia patients?

Indeed, it is interesting that a key issue raised in the discussion (indeed what I would say is perhaps a key ethical issue) is the over-the-counter status and whether the IATs actually constitute a 'medical device' and that consent is reduced to terms of service agreement vs a traditional informed consent. This it seems is a key issue and agree it is important for the authors to make this point (this doesn't come through from the interview results - was this the context in which the comments about consent and autonomy were made?). Of course, as the authors point out this is also an issue with other devices such as smartphone apps and wearable devices that can provide health-related information. Indeed, this intersects with the theme about data sharing and management: if these are medical devices then certain forms of regulation and governance applies (or may apply). I think these two aspects could be more closely related in the discussion and some discussion of the current regulatory environment would be useful in this regard.

I wasn't clear on the comment (in the paragraph on deception) that they were being given "false information". Was this about pretending an animal was a real dog (for example)? I would like to see this theme developed in the discussion, especially given the mentioning of beneficence and whether there may be principled approaches to the use of IATs that require deception but which may also bring with them additional obligations (e.g. does this require monitoring of distress, and what are the implications of this?). I would also appreciated more discussion of the idea that lies are acceptable if in the dementia patients' best interest as this seems to lead back to paternalism; who decides the best interests?

The section on not replacing human contact was interesting, but lacked contextualization with the literature. More references here would have been useful.

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If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?  
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